Polemonium pectinatum (Greene)

Washington polemonium
Polemoniaceae (Phlox Family)

Status: State Threatened, USFWS Species of Concern
Rank: G2S2

General Description: A taprooted perennial 1-3 feet tall with clustered stems. The inflorescence is glandular. The leaves, both basal and stem, are composed mostly of 11-17 long, very narrow, widely separated leaflets that are 1/2 to 2 inches long and less than 1/8 inch wide. The flowers occur in branched, more or less rounded inflorescences. The petals are a light blue-lavender (fading toward cream or white) and are about 1/2 inch long. The flowers are somewhat bell-shaped.

Identification Tips: This species is very distinctive and can be distinguished from other members of the genus mainly by the narrow leaflets, the size of the stem clusters and the overall size and habit of the plant. No other perennial member of the genus occurs within the range of *P. pectinatum.*

Phenology: This species starts to bloom from mid-May to late-May. Those individuals in the most exposed sites begin to fruit by the first week of June and by mid-June have well developed seed capsules. Individuals in less exposed microsites may lag about 2 weeks behind those in the more open sites. Mature seeds develop on most individuals by the first week of July.

Range: Regional endemic; Whitman, Spokane, Lincoln, and Adams cos., WA in the Columbia Basin physiographic province.

Habitat: This species occurs within an arid to semi-arid environment. It is found on coulee floors, upland creek terraces, mid-slope depressions, in draws with ephemeral creeks, and on a biscuit in biscuit scablands. The species can be found in the following vegetation zones of Daubenmire (1970): big sagebrush/Idaho fescue, big sagebrush/bluebunch wheatgrass, and Idaho fescue/snowberry. Associated species include black hawthorn (*Crataegus douglasii*), serviceberry (*Amelanchier alnifolia*), giant wildrye (*Elymus cinereus*), Wood's rose (*Rosa woodsii*), and golden currant (*Ribes aureum*). Soils are alluvial and/or colluvial in origin. Elevation : 1500-2300 ft.

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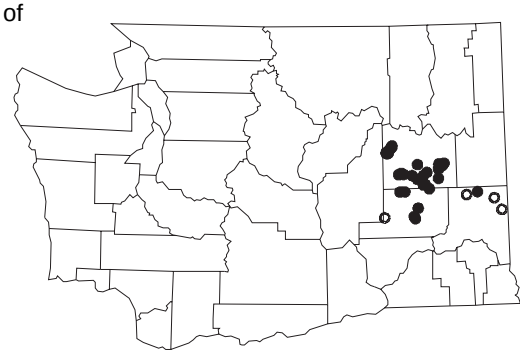
Known distribution of *Polemonium pectinatum* in Washington



● Current (1980+)
◎ Historic (older than 1980)

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Jim Barrett

Mark Sheehan

1997 Produced as part of a cooperative project between the Washington Department of Natural Resources, Washington Natural Heritage Program, and the U.S.D.I. Bureau of Land Management.
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Ecology: *P. pectinatum* occurs within microsites that are somewhat more moist than the surrounding habitat. However, the sites are typically dry enough by late summer to carry a fire. The species' response to fire is unknown. The species has an underground bud, so probably is unaffected by moderate fire intensities. Many sites are located along the banks of intermittent streams or terraces immediately adjacent to such streams. Unfortunately, the relationship between flooding and population dynamics has been obscured by various land use practices that have affected the hydrology of these stream systems.

State Status Comments: The taxon was historically known from northern Whitman Co., southern Spokane Co., and western Adams Co., WA. There are currently extant sites known from Adams, Lincoln, and Whitman cos., WA. All known sites, both extant and historical, occur within an area approximately 110 miles x 50 miles.

Inventory Needs: Portions of the species' range have been systematically inventoried. However, it is probable that additional occurrences will be found within the drainage areas currently known to harbor the species. In addition, it is probable that other drainages in the area may contain pockets of suitable habitat.

Threats and Management Concerns: A significant amount of habitat has been lost to agricultural conversion to either dryland farming or irrigated cropland and pastures. Additional losses should be avoided. Livestock grazing results in changes in species composition and plant community structure, in particular the invasion of sites by non-native species. The species' response to grazing, however, is undoubtedly related to stocking levels, timing, water availability, etc. The combination of agricultural and grazing practices has also led to significant hydrologic changes at some sites.

References:

Hitchcock, C.L., A. Cronquist, M. Ownbey, and J.W. Thompson. 1959. *Vascular Plants of the Pacific Northwest, Part 4: Ericaceae through Campanulaceae*. University of Washington Press, Seattle. 510 pp.

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